

Residue#

Rabbit AA

HPSPAPVXXD TVHGKVLGKFV SXEGFAQPVAKFXG

Rabbit (P12337)

HHPSAPPVDTVKGKVLGKFVSLGFAQPVAVFLGVP

Human

(P23141)

MWLRAFILATLSASAANGHPSPVVDTVHGKVLKGFVSLGEFAQPVAIFLGIP

Rat

(P10959)

MWLCALVWASLAVCPIWGHPSSPPVDTTKGKVLGKYVSLGFTQFPVAVFLGVP

Mouse

(P23953)

MWLHALVWASLAVCPILGHSLLPPVDDTTQGKVLGKYISLEGFEQPVAVFLGVP

FIGURE 1

Residue #	1	5	Residue #	518
Amino acid sequence	His Pro Ser Ala Pro		Amino acid sequence	Ala Phe Trp Thr Glu Leu Trp
Coding Sequence	CAC CCA AGC GCA CC		Coding sequence	GCA TTC TGG ACA GAA CTA TGG
	T G T G			G T G G
	C C			C C
	T T			T T
Oligonucleotide	CAC CCI AGC GCI CC		Reverse complement	CCA AAG TTC AGT CCA GAA AGC
Rab51	T T			G C G A G
				C C C C
				T T T T
Amino acid sequence	His Pro Ser Ala Pro		Oligonucleotide	CCA IAG TTC IGT VVA GAA IGC
Coding Sequence	CAC CCA AGC GCA CC		Rab 31	C A
	T G T G			
	C C			
	T T			
Oligonucleotide	CAC CCI TCI GCI CC		Amino acid sequence	Ala Phe Trp Thr Glu Leu Trp
Rab 52			Coding sequence	GCA TTC TGG ACA GAA CTA TGG
				G T G G
				C C
				T T
Reverse complement	CCA TAA TTC AGT CCA GAA AGT			
	C C G A G			
Oligonucleotide	CCA TAA TTC IGT CCA GAA IGC			
	C C C A			

FIGURE 2

Residue #	
Rabbit	<u>MWLCALALASLA</u> ACTANGHPSPAPPVVDTVK
Rat (P10959)	MWLCALVWASLAVCPINGHPSSPPVVDTTK
Human (P23141)	MWLRAFILATLSASAANGHPSSPPVVDTVH
Rat (P16303)	MRLYPVWLFIAACTAWGYPPSSPPVVNTVK
Mouse (P23953)	MWLHALVWASLAVCPILGHSLLPPVVDTTQ

FIGURE 3

GAATTCTGCC ATG TGG CTC TGT GCA TTG GCC CTG GCC TCT CTC TGC ACG GCT TGG GGG CAC CCG TCT GCA
 Met Trp Leu Cys Ala Leu Ala Ser Leu Ala Ala Cys Thr Ala Trp Gly His Pro Ser Ala

CCA CCT GTG GTA GAT ACT GTG CAT GGC AAA GTC CTG GGG AAG TTC GTC AGC TTA GAA GGA TTT GCA CAG CCC GTG
 Pro Pro Val Val Asp Thr Val His Gly Lys Val Leu Gly Lys Phe Val Ser Leu Glu Gly Phe Ala Gln Pro Val

GCC GTC TTC CTG GGA GTC CCC TTC GCC AAG CCC CCT CTT GGA TCC CTG AGG TTT GCA CCA CCA CAG CCT GCA GAA
 Ala Val Phe Leu Gly Val Pro Phe Ala Lys Pro Pro Leu Gly Ser Leu Arg Phe Ala Pro Pro Gln Pro Ala TCA

TTG AGC CAC GTG AAG AAC ACC ACC TCC TAC CCT CCC ATG TGC TCC CAG GAC GCA GTA TCA GGG CAT ATG CTC Glu
 S r Trp Ser His Val Lys Asn Thr Thr Ser Tyr Pro Pro Met Cys Ser Gln Asp Ala Val Ser Gly His Met TCG
GAG CTC TTC ACC AAC AGA AAA GAG AAC ATC CCT CTT AAG TTT TCT GAA GAC TGC CTT TAC CTG AAT ATT TAC
 Leu Ser Glu Leu Phe Thr Asn Arg Lys Glu Asn Ile Pro Leu Lys Phe Ser Glu Asp Cys Leu Tyr Leu Asn Ile

ACC CCT GCT GAC CTG ACA AAG AGA GGC AGG CTG CCG GTG ATG GTG TGG ATC CAT GGA GGT GGT CTG ATG GTG GGT
 Tyr Thr Pro Ala Asp Leu Thr Lys Arg Gly Arg Leu Pro Val Met Val Trp Ile His Gly Gly Leu Met Val

GGA GCA TCA ACC TAT GAT GGC CTG GCT CTT TCT GCC CAT GAG AAC GTG GTG GTG ACC ATT CAG TAC CGC CTG
 Gly Gly Ala Ser Thr Tyr Asp Gly Leu Ala Leu Ser Ala His Glu Asn Val Val Val Thr Ile Gln Tyr Arg

GGC ATC TGG GGA TTC AGC ACA GGA GAT GAG CAC AGC CGA GGG AAC TGG GGT CAC TTG GAC CAG GTG GCT GCG
 Leu Gly Ile Trp Gly Phe Phe Ser Thr Gly Asp Glu His Ser Arg Gly Asn Trp Gly His Leu Asp Gln Val Ala

CTG CGG TGG GTC CAG AAC ATT GCC AAC TTT GGA GGG GAC CCA GGC TCT GTG ACC ATC TTT GGA GAG TCA GCA
 Ala Leu Arg Trp Val Gln Asp Asn Ile Ala Asn Phe Gly Gly Asp Pro Gly Ser Val Thr Ile Phe Gly Glu Ser

FIGURE 4

GGG GGT CAA AGT GTC TCT ATC CTT CTA TTA TCC CCC CTG ACC AAG AAT CTC TTC CAT CGA GCA ATT TCC GAG AGT
Ala Gly Gln Ser Val Ser Ile Leu Leu Ser Pro Leu Thr Lys Asn Leu Phe His Arg Ala Ile Ser Glu
GGC GTG GCC CTC CTT TCC AGT CTC TTT AGG AAG AAC ACC AAG TCC TTG GCT GAG AAA ATT GCC ATC GAA GCT GGG
Ser Gly Val Ala Leu Ser Ser Ser Leu Phe Arg Lys Asn Thr Lys Ser Leu Ala Glu Lys Ile Ala Ile Glu Ala
TGT AAA ACC ACC ACC TCG GCT GTC ATG GTT CAC TGC CTG CGC CAG AAG ACA GAG GAA GAA CTC ATG GAG GTG ACA
Gly Cys Lys Thr Thr Thr Ser Ala Val Met Val His Cys Leu Arg Gln Lys Thr Glu Glu Leu Met Glu Val
TTG AAA ATG AAA TTT ATG GCT CTA GAT CTA GTT GGC GAC CCC AAA GAG AAC ACC GCC TTC CTG ACC ACT GTG ATT
Thr Leu Lys Met Lys Phe Met Ala Leu Asp Leu Val Gly Asp Pro Lys Glu Asn Thr Ala Phe Leu Thr Thr Val
GAT GGG GTG CTG CCA AAA GCA CCT GCA GAG ATT CTG GCA AAG AAA TAC AAC ATG CTG CCC TAC ATG GTG
Ile Asp Gly Val Leu Leu Pro Lys Ala Pro Ala Glu Ile Leu Ala Glu Lys Lys Tyr Asn Met Leu Pro Tyr Met
GGA ATC AAC CAG CAA GAG TTT GGC TGG ATT ATC CCA ATG CAA ATG CTG GGC TAT CCA CTC TCT GAA GGC AAA CTG
Val Gly Ile Asn Gln Gln Glu Phe Gly Trp Ile Ile Pro Met Gln Met Leu Gly Tyr Pro Leu Ser Glu Gly Lys
GAC CAG AAG ACA GCT ACA GAA CTC TTG TGG AAG TCC TAC CCC ATT GTC AAT GTC TCT AAG GAG CTG ACT CCA GTG
Leu Asp Gln Lys Thr Ala Thr Glu Leu Trp Lys Ser Tyr Pro Ile Val Asn Val Ser Lys Glu Leu Thr Pro
GCC ACT GAG AAG TAT TTA GGA GGG ACA GAT GAC CCT GTC AAA AAG AAA GAC TTG TTC CTG GAC ATG CTT GCA GAT
Val Ala Thr Glu Lys Tyr Leu Gly Gly Thr Asp Asp Pro Val Lys Lys Lys Asp Leu Phe Leu Asp Met Leu Ala
TTG TTA TTT GGT GTC CCA TCT GTG AAT GTG GCT CGT CAC CAC AGA GAT GCT GGA GCC CCC ACC TAT ATG TAT GAG
Asp Leu Leu Phe Gly Val Pro Ser Val Asn Val Ala Arg His His Arg Asp Ala Gly Ala Pro Thr Tyr Met Tyr

FIGURE 4 CONTINUED

TAT CGG TAT CGC CCA AGC TTC TCA TCA GAC ATG AGA CCC AAG ACA GTG ATA GGG GAC CAT GGA GAT GAG ATC TTC
Glu Tyr Arg Tyr Arg Pro Ser Phe Ser Ser Asp Met Arg Pro Lys Thr Val Ile Gly Asp His Gly Asp Glu Ile

TCT GTC TTA GGA GCC CCG TTT TTA AAA GAG GGT GCC ACA GAA GAG GAG ATC AAA CTG AGC AAG ATG GTG ATG AAA
Phe Ser Val Leu Gly Ala Pro Phe Leu Lys Glu Gly Ala Thr Glu Glu Ile Lys Leu Ser Lys Met Val Met

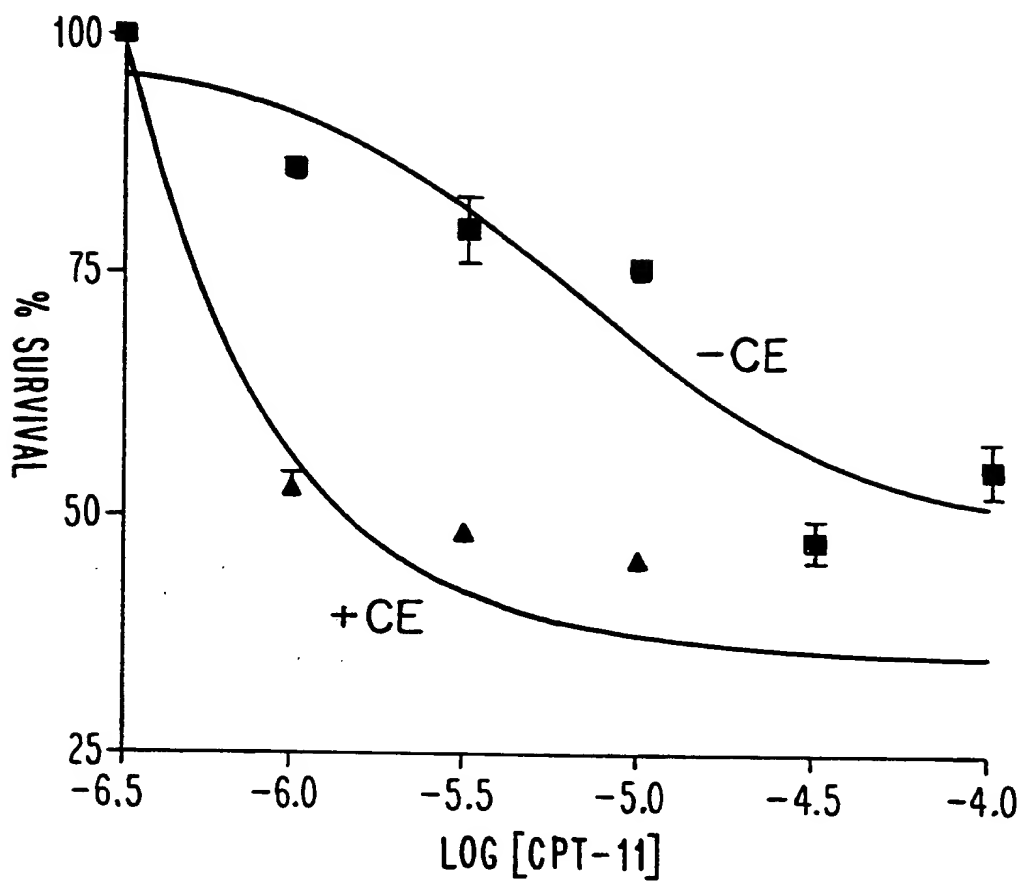
TAC TGG GCC AAC TTT GCT AGG AAT GGG AAT CCC AAT GGA GAA GGG CTT CCT CAA TGG CCA GCA TAT GAC TAC AAG
Lys Tyr Trp Ala Asn Phe Ala Arg Asn Gly Asn Pro Asn Gly Glu Gly Leu Pro Gln Trp Pro Ala Tyr Asp Tyr

GAA GGT TAC CTG CAG ATT GGA GCC ACC ACC CAG GCA GCC CAG AAA CTG AAA GAC AAG GAA GTG GCT TTC TGG ACT
Lys Glu Gly Tyr Leu Gln Ile Gly Ala Thr Thr Gln Ala Ala Gln Lys Leu Lys Asp Lys Glu Val Ala Phe Trp

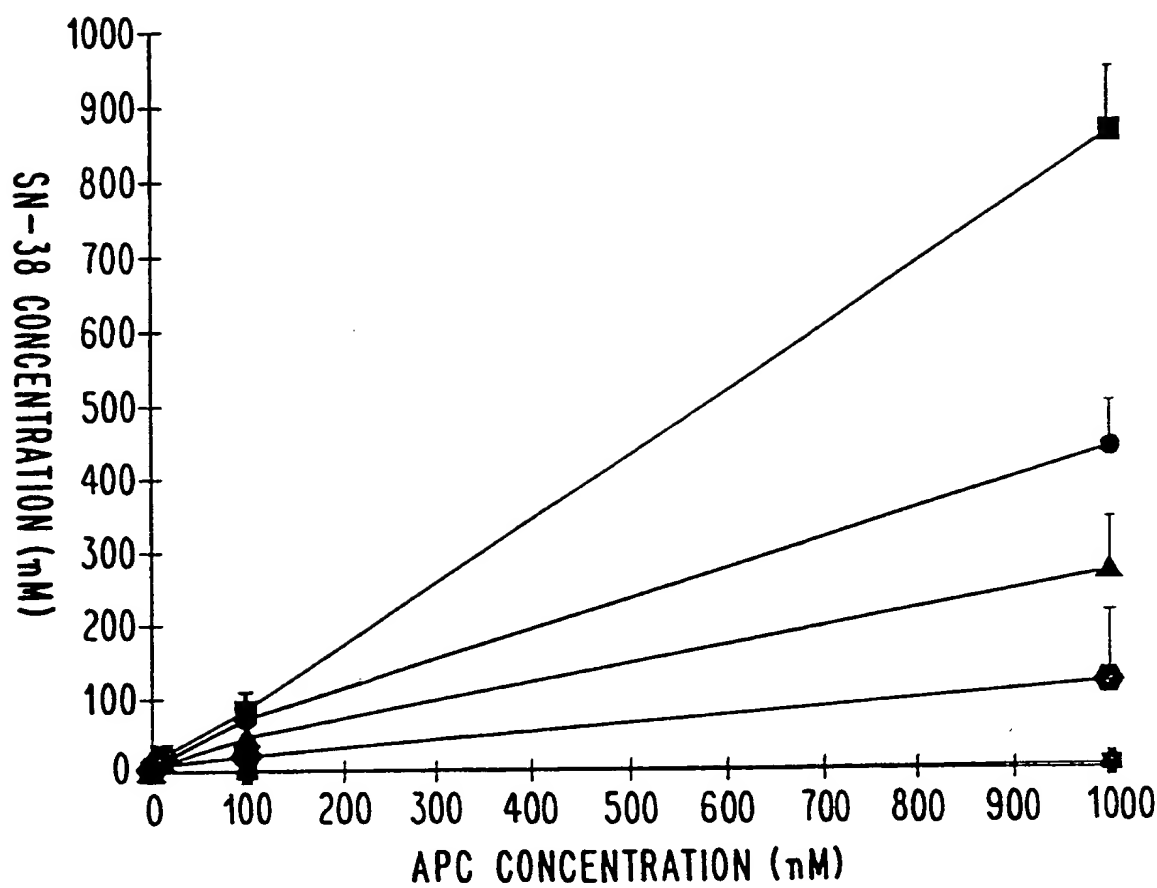
GAG CTC TGG GCC AAG GAG GCA GCA AGG CCA CGT GAG ACA GAG CAC ATT GAG CTG TGA ATT GAATTC
Thr Glu Leu Trp Ala Lys Glu Ala Ala Arg Pro Arg Glu Thr Glu His Ile Glu Leu

FIGURE 4 CONTINUED

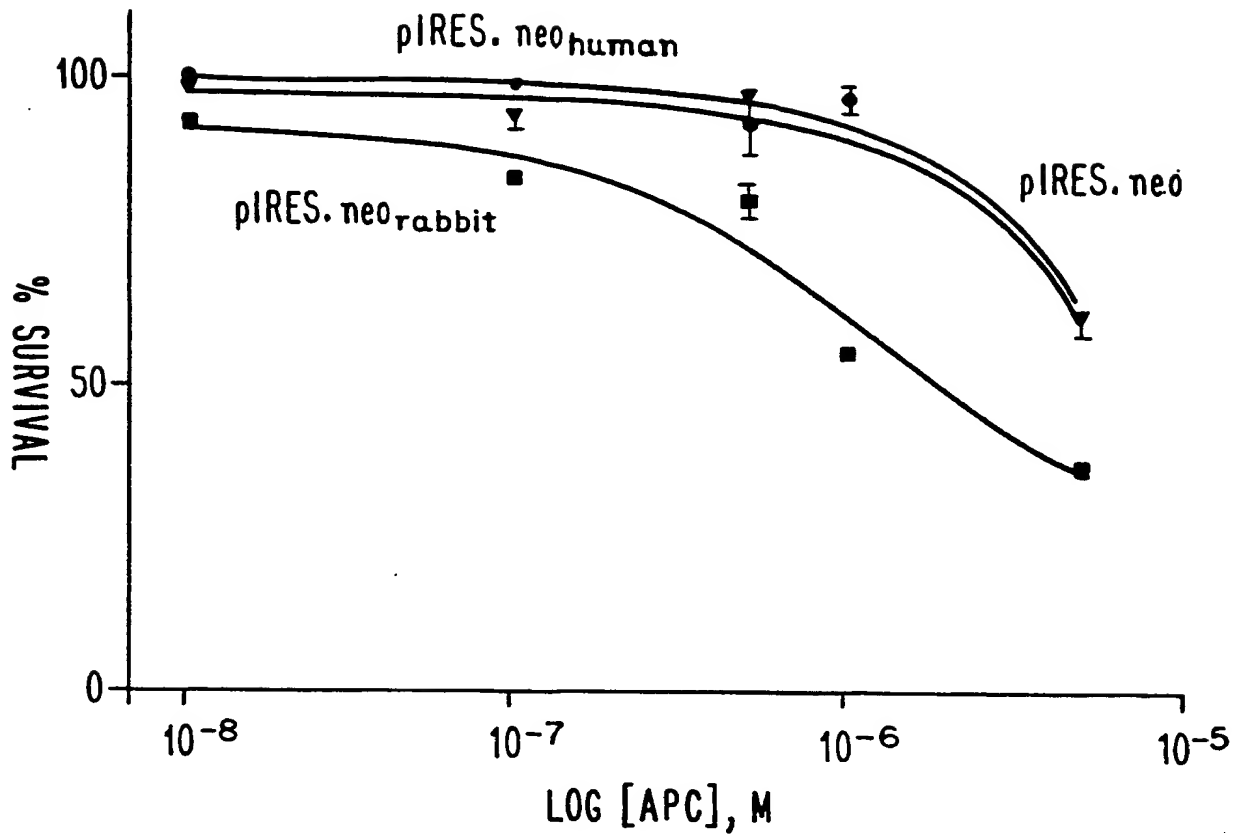
7/13

***Fig. 5***

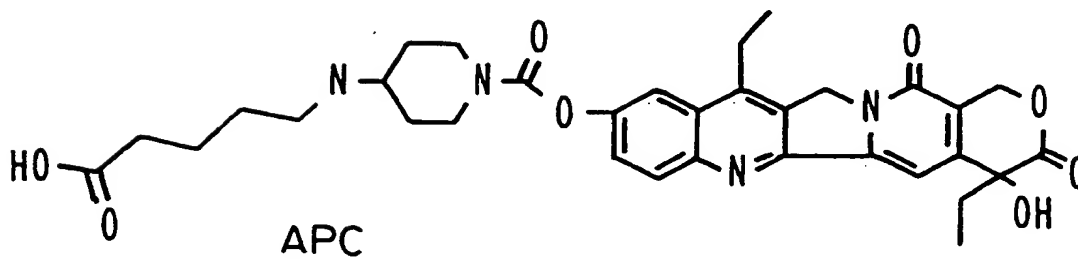
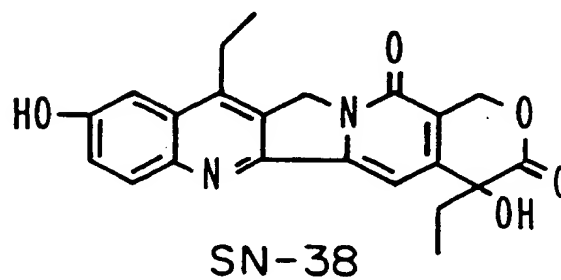
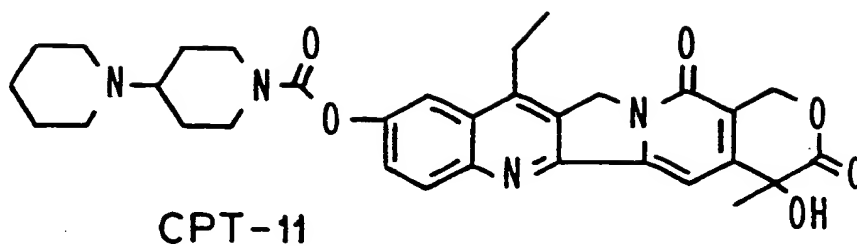
8/13

***Fig. 6***

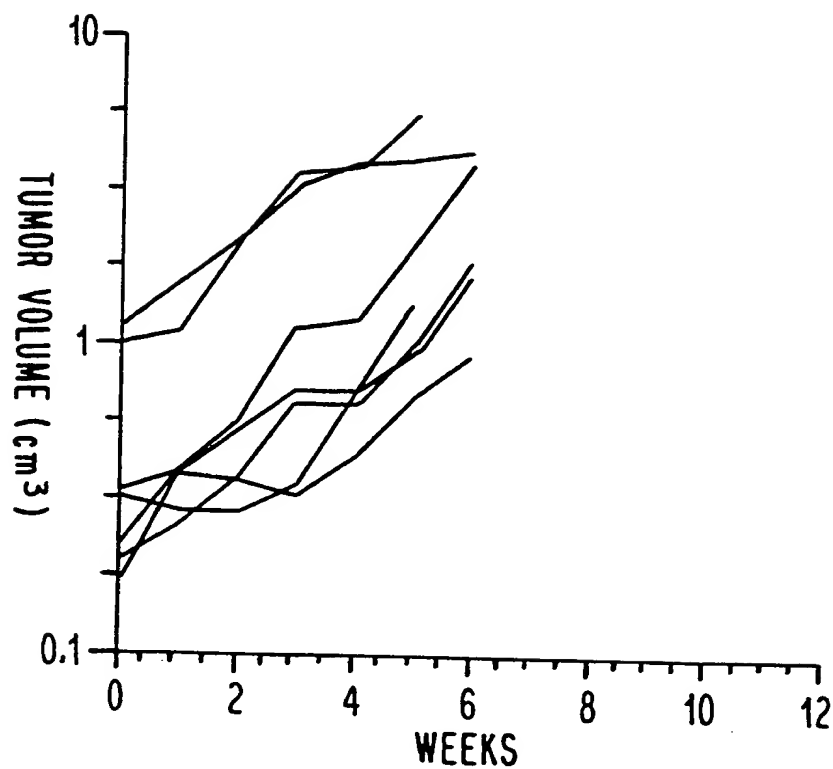
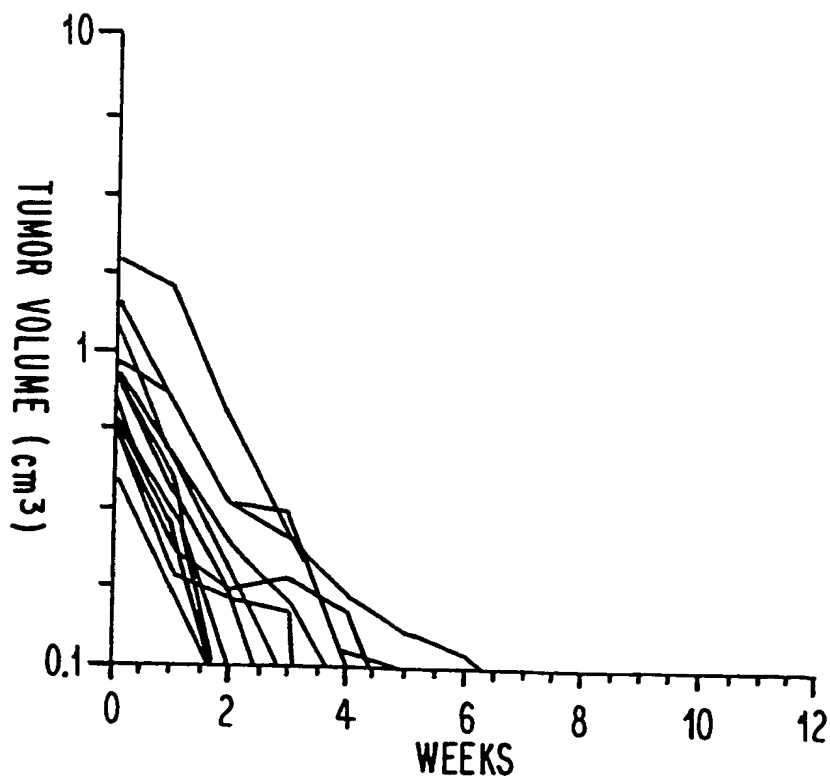
9/13

***Fig. 7***

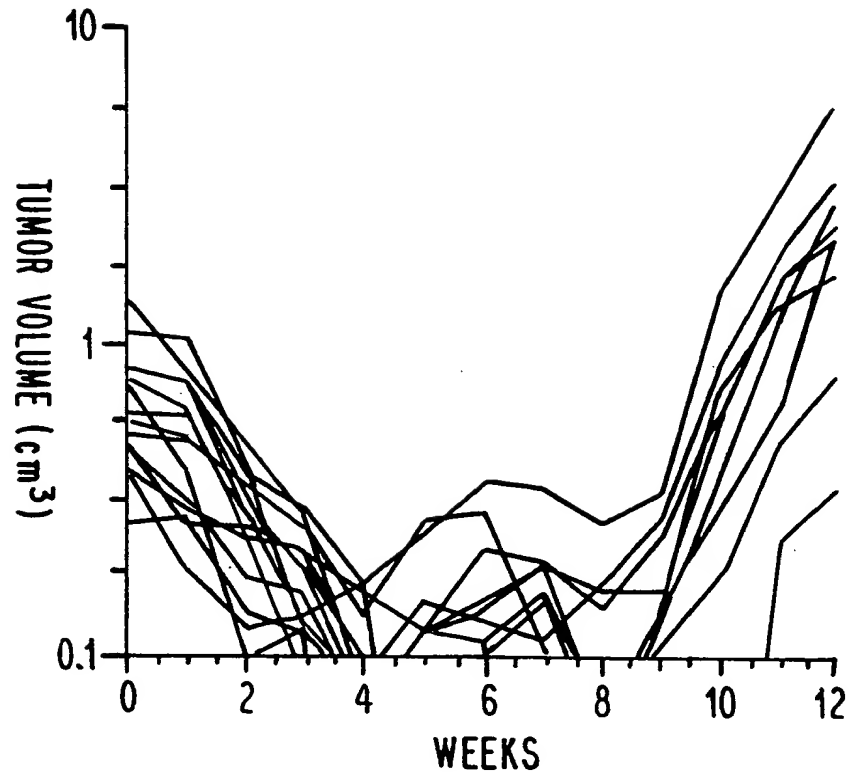
10/13

***Fig. 8***

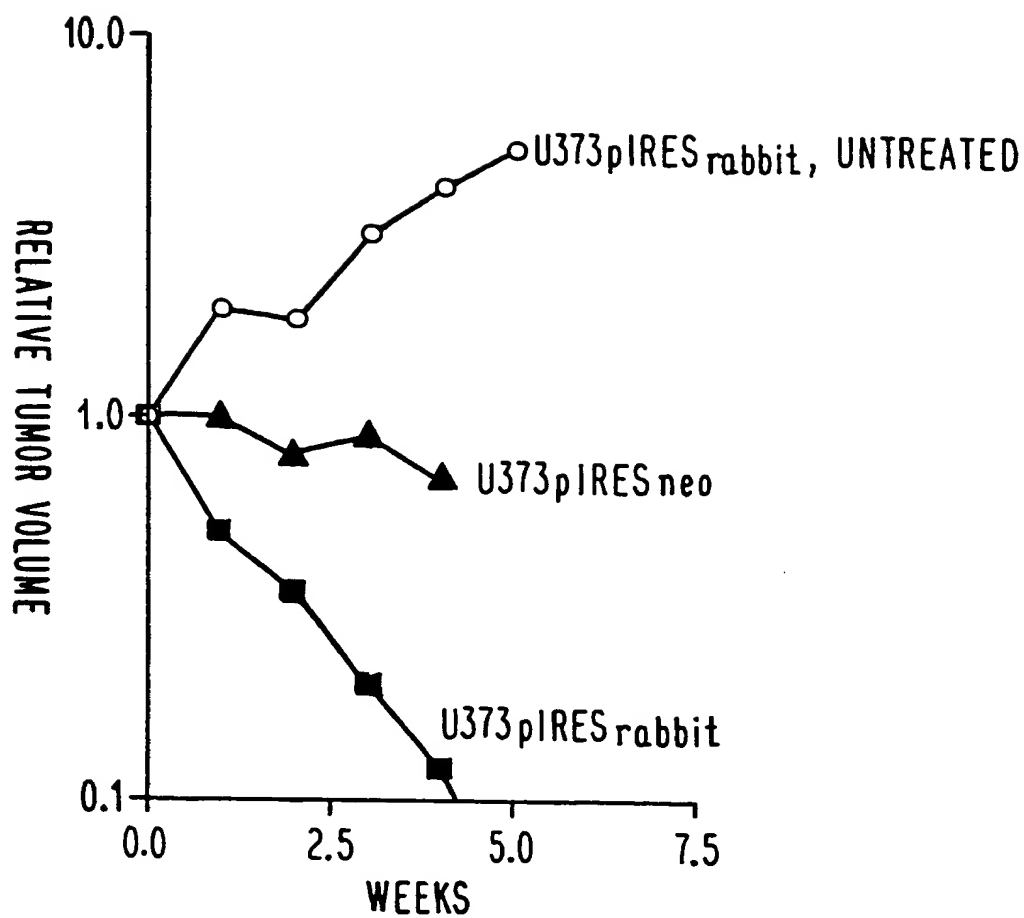
11/13

Fig. 9A***Fig. 9B***

12/13

**Fig. 9C**

13/13

***Fig. 10***